

# SOS: California's Native Fish Crisis

*Status of and solutions for restoring our vital  
salmon, steelhead and trout populations*



*California Golden Trout  
State Fish of California*

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*Based on a report by Dr. Peter B. Moyle, Dr. Joshua A. Israel,  
and Sabra E. Purdy, commissioned by California Trout*

ILLUSTRATIONS BY JOSEPH TOMELLERI



# Today's Talk

- ◆ Update on McCloud/Nestle
- ◆ Introduce Mount Shasta Springs Study
- ◆ Integrated Regional Water Management Plan (IRWMP) Application







# World Renowned Fish





# Town of McCloud





# McCloud Mill Site





# The Threat: Nestle Waters of North America

- ◆ 2003 Nestle signs a contract with the McCloud service district.
  - ◆ One million sq foot bottling plant-one building covering 22 acres
  - ◆ ~552,000,000 gallons of water at .00008 ¢ a gallon
  - ◆ 100 years with no opportunity to renegotiate
  - ◆ A truck every 3 minutes to haul the water to LA
  - ◆ NO baseline science = no way to prove harm



# History of Nestle Project

- ◆ Fall 2003
  - ◆ McCloud signs contract with Nestle
- ◆ 2004-2005
  - ◆ Legal challenge by local citizens, denied
- ◆ Fall 2006—Draft EIR
  - ◆ Over 4,000 comments
  - ◆ Egregious, “worst I have ever seen”
- ◆ Summer 2007
  - ◆ Nestle scraps Draft EIR
- ◆ Summer 2008
  - ◆ Nestle cancels contract with the town



# Where Are We Now?

- ◆ Nestle scaled back the plant and cancelled the contract
  - ◆ Pushing to re-open negotiations
  - ◆ 350,000 sq. ft. plant
  - ◆ 600 acre feet of water
- ◆ Two years of baseline aquatic biology and hydrology data, flow reduction experiment underway
- ◆ Town not committing to renegotiations, yet



# Protect Our Waters Coalition

**JOINING TOGETHER TO PROTECT Mount  
Shasta's unique water supply by investing in  
science, education and policy analysis**



**CALIFORNIA TROUT**



KEEPER OF THE STREAMS





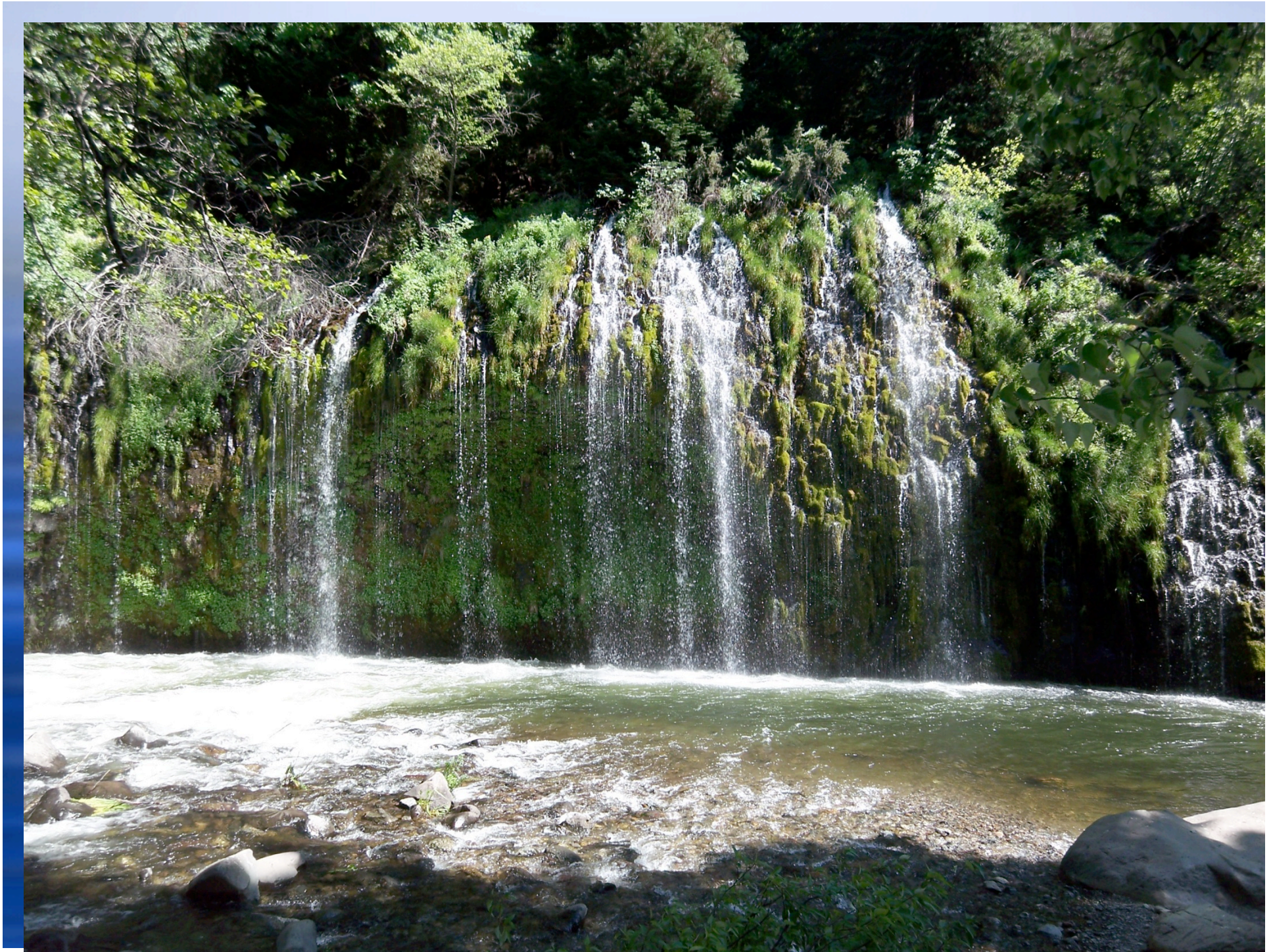
# Importance of Spring Water

- ◆ Biological
  - ◆ Shasta River
  - ◆ Upper Sacramento River
  - ◆ McCloud River
- ◆ Keystone rivers in their respective watersheds











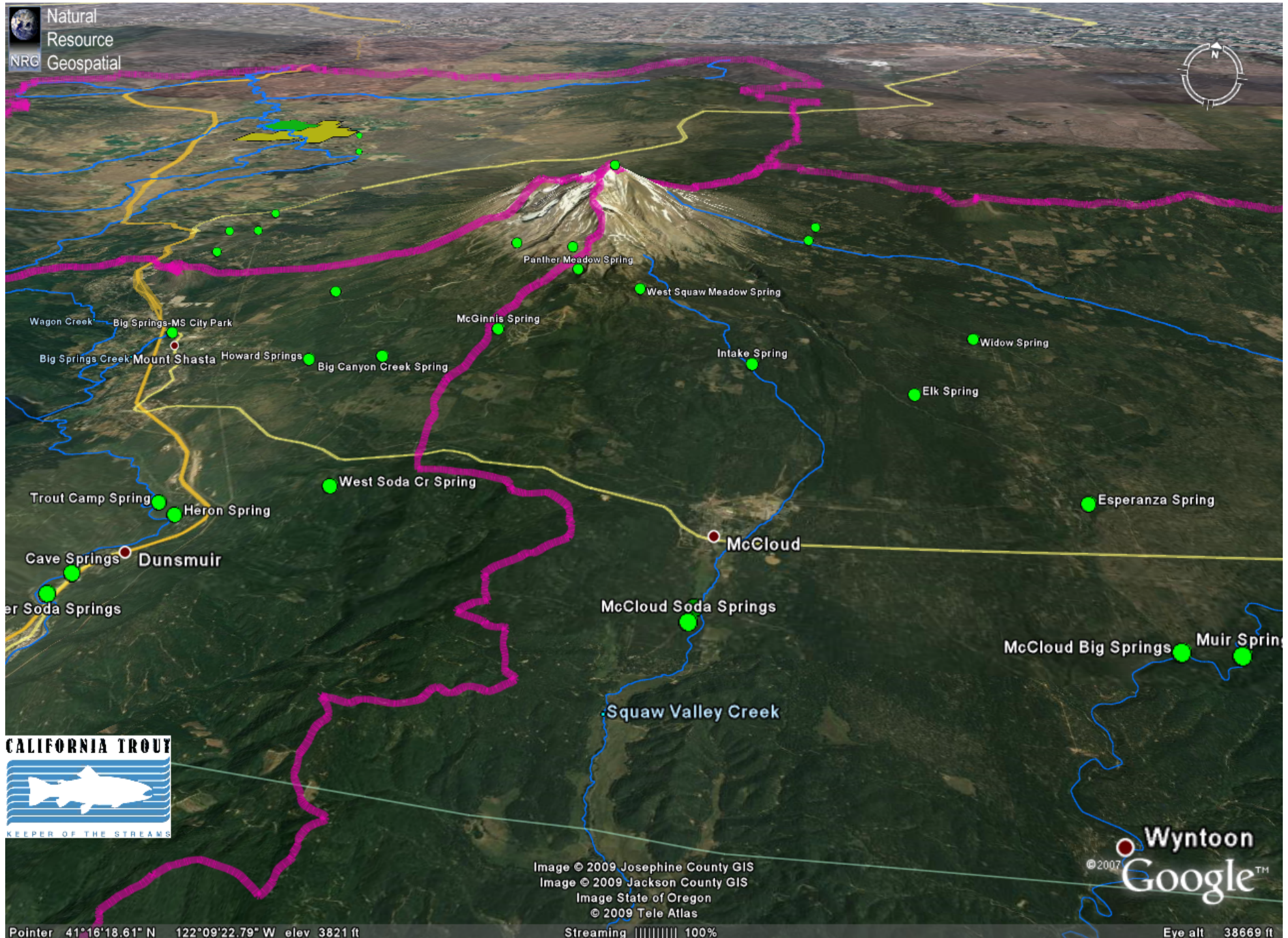




# Mt. Shasta Springs Study

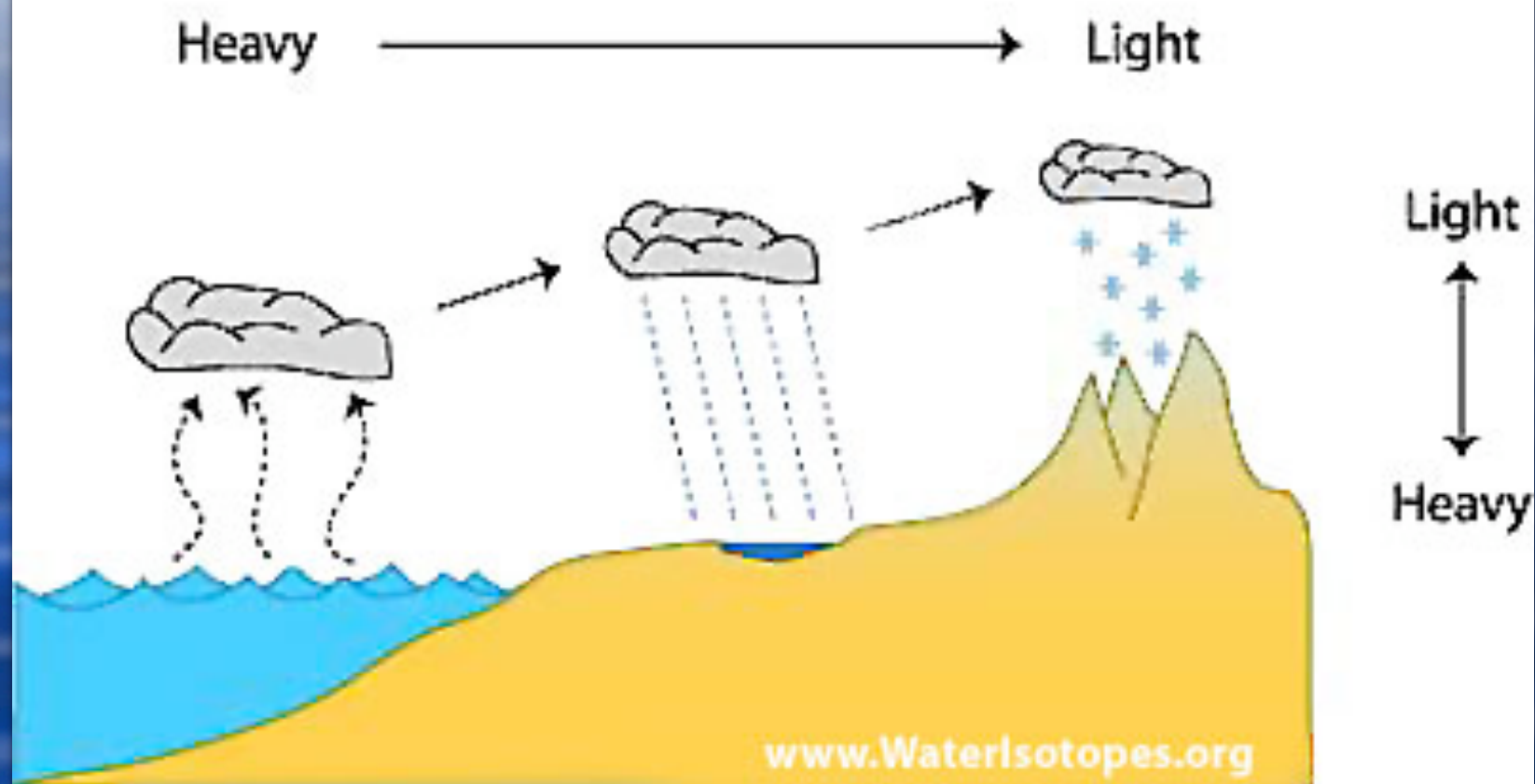
- ◆ First order characterization of spring water general and physical chemistry and isotopic analysis
- ◆ 23 springs—temperature, flow , isotopes, tritium (3 springs)
- ◆ To determine groundwater basins, recharge elevations, and residence time





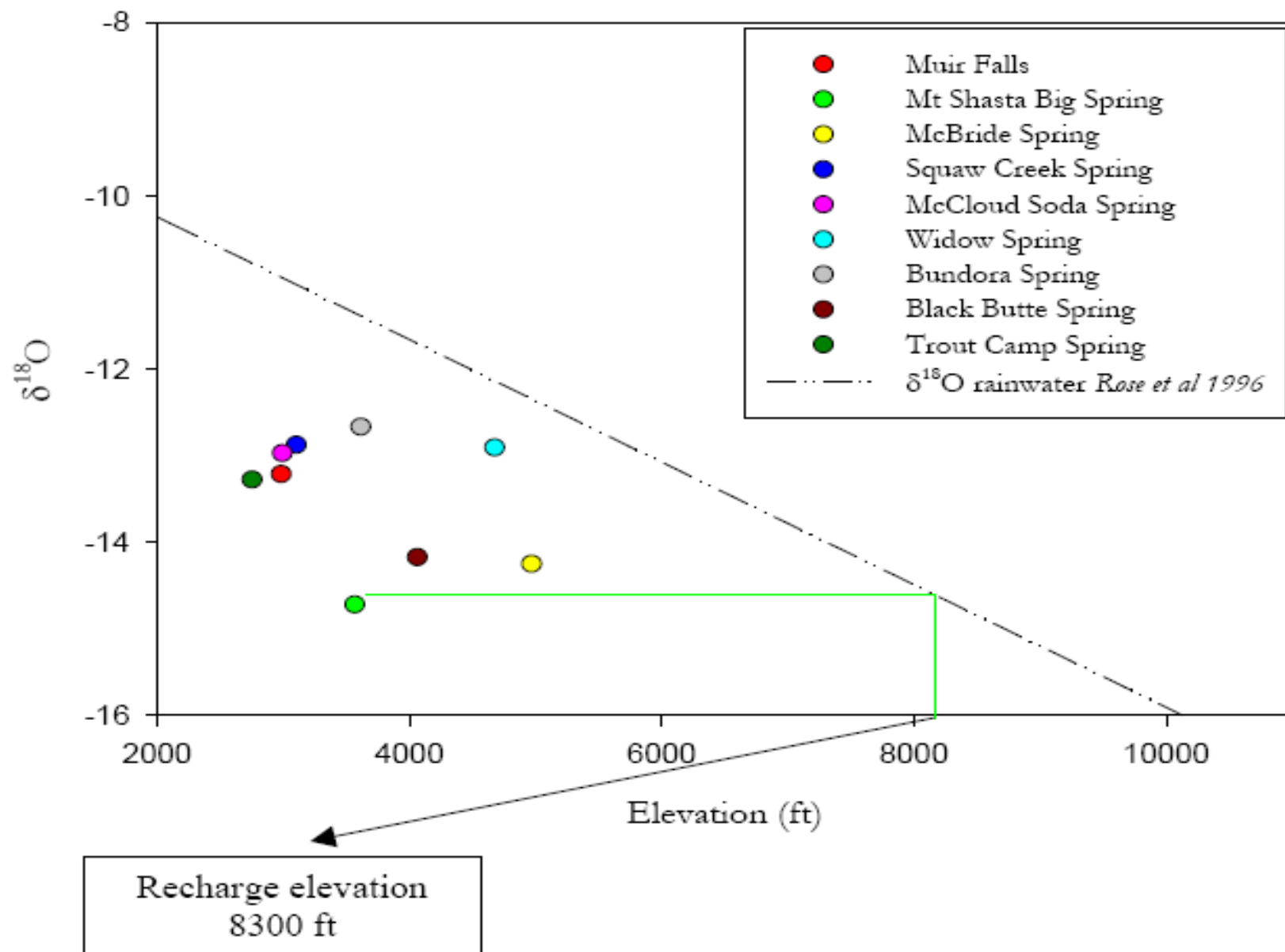


## *Partitioning of Isotopes in Vapor and Precipitation*





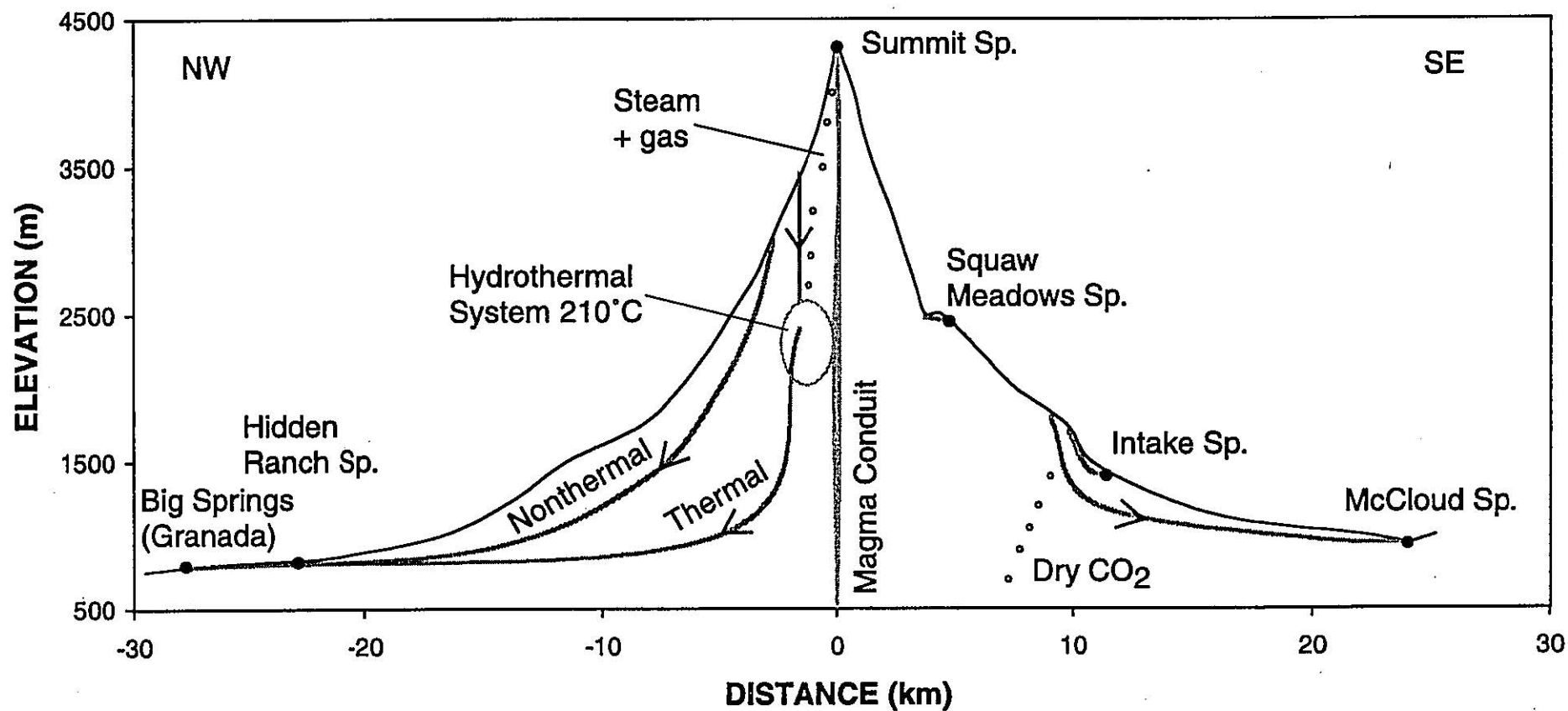
## Mt Shasta Spring Water





1. Non-thermal springs, immediate recharge area, higher vulnerability
2. Non-thermal springs, high recharge elevation, lower vulnerability
3. Slightly thermal springs, high recharge elevation, hydrothermal influence
4. Slightly thermal *mineral* springs with high amounts of dissolved constituents





Nathenson, et al.  
2006







Mt. Shasta, ca



# BIG SPRINGS - MT SHASTA CITY PARK



Recharge Area	8170 FT
Elevation:	
Watershed:	Sacramento Headwaters
Vulnerability Index:	TBD
Threats:	TBD
Age:	TBD
Spring Connections:	TBD
Average Temp:	7.23 C
Available Data:	Isotope, General Physical, General Chemical, Continuous Temperature Monitoring





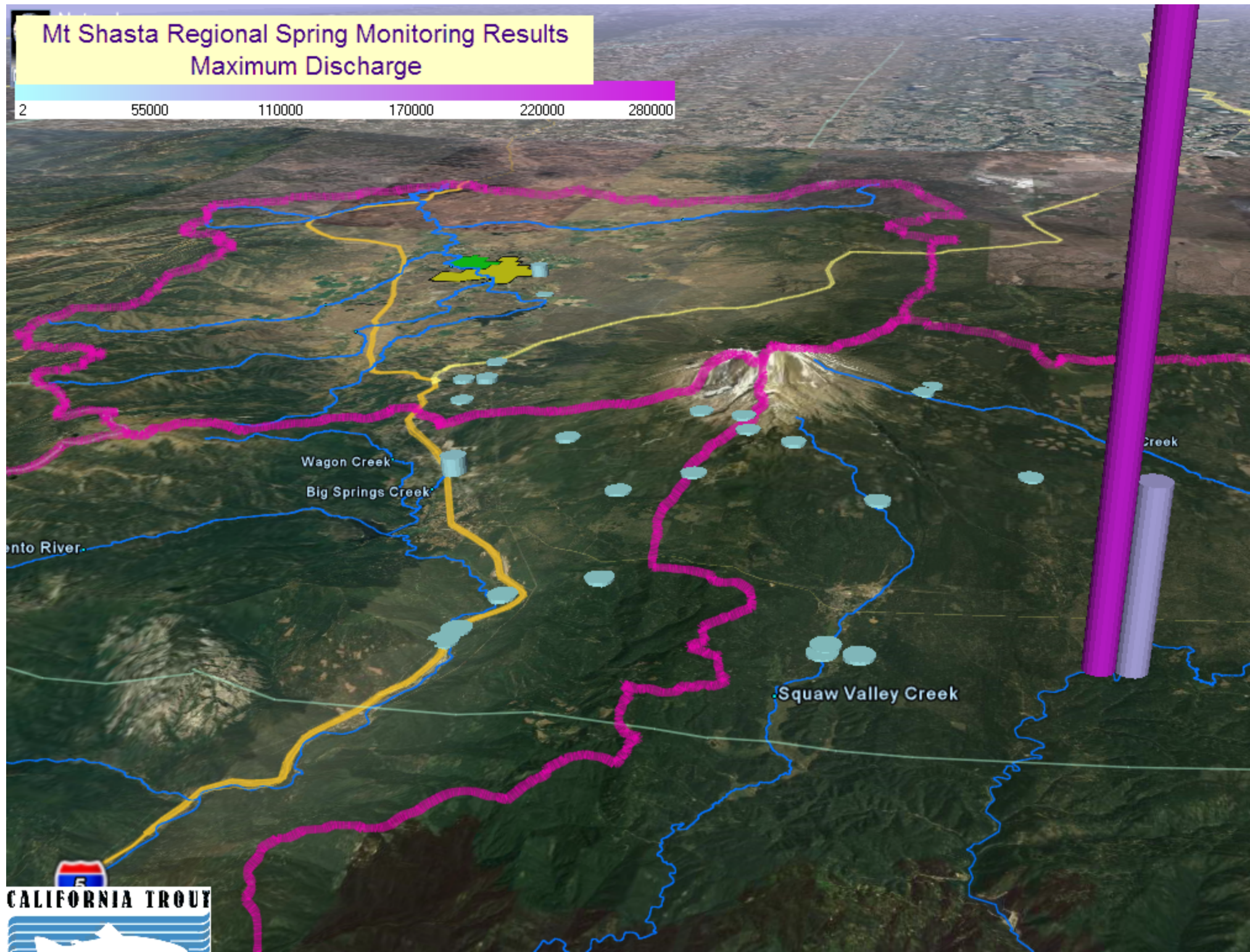




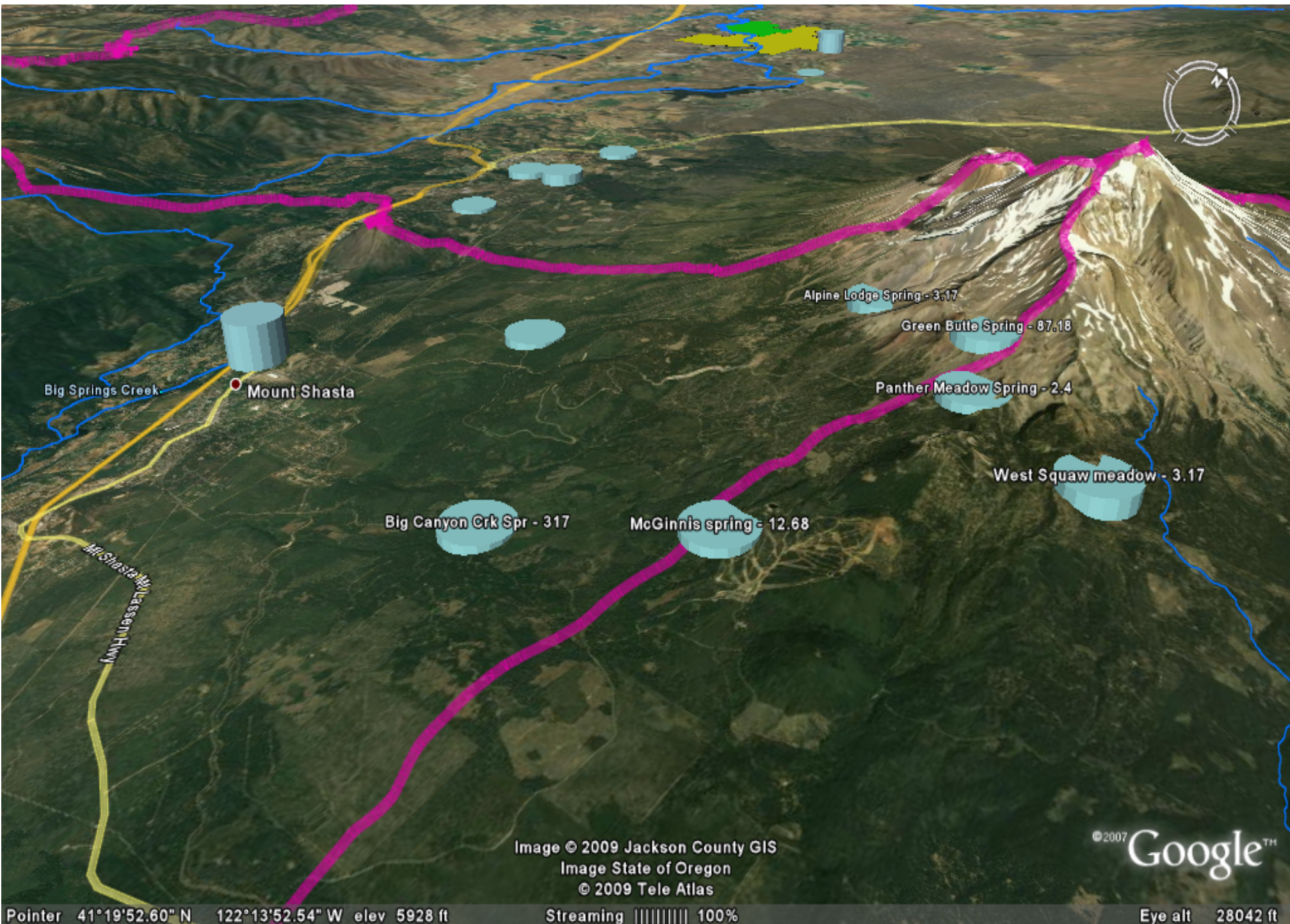


# Mt Shasta Regional Spring Monitoring Results Maximum Discharge

2 55000 110000 170000 220000 280000









# IRWMP Integrated Regional Watershed Management Plan

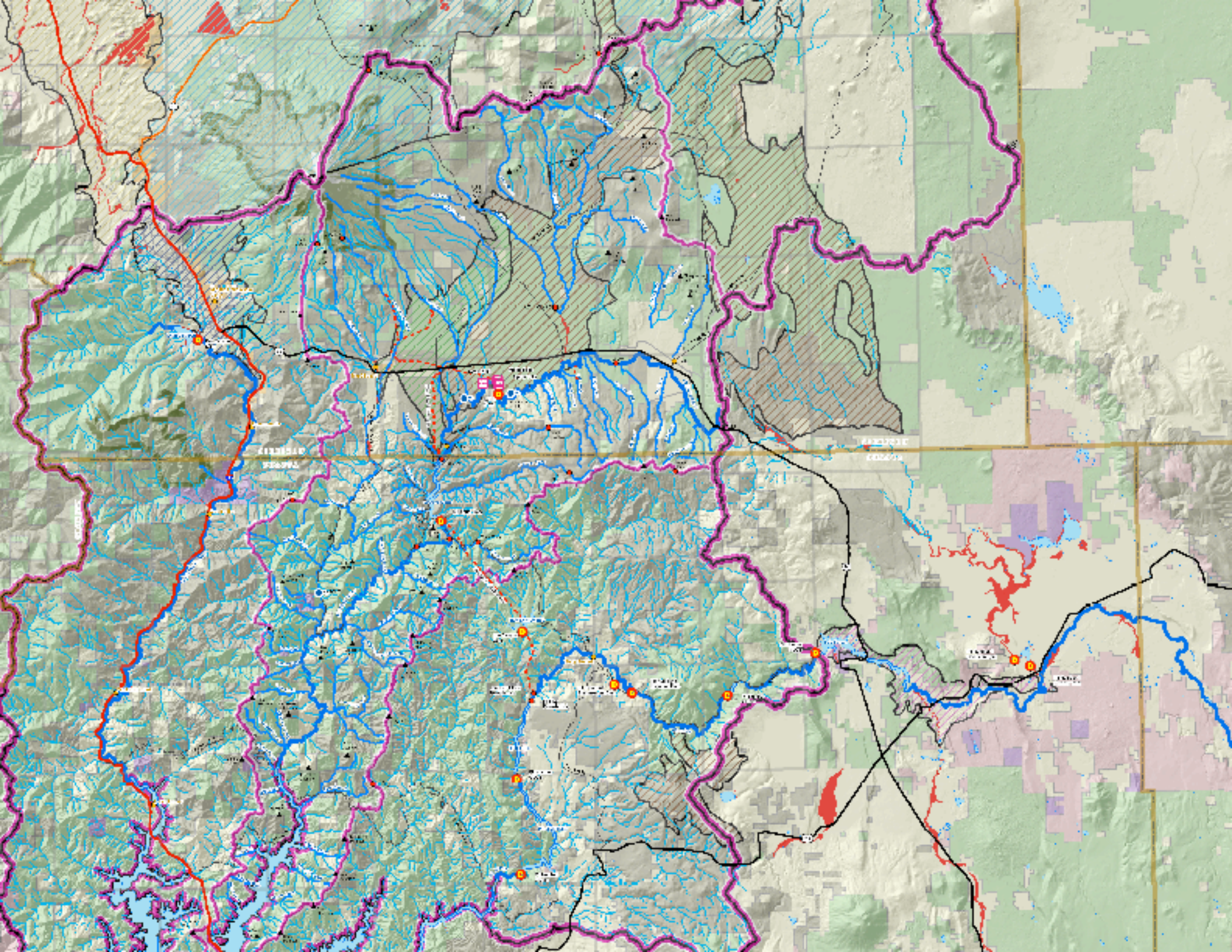
- ◆ What it is, why we applied
- ◆ RWMG Composition
- ◆ Proposed Region Map
- ◆ Next Steps



# Regional Watershed Management Group

- ♦ The City of Mount Shasta (SA)\*
- ♦ The City of Dunsmuir (SA)
- ♦ McCloud Community Services District (SA)
- ♦ Siskiyou County (SA)
- ♦ Winnemem Wintu tribe
- ♦ U.S. Forest Service, Shasta Trinity National Forest (SA)
- ♦ U.S. Fish and Wildlife Service, Red Bluff office (SA)
- ♦ California Department of Fish and Game, Redding office (SA)
- ♦ McCloud Watershed Council
- ♦ McCloud CRMP (private landowners in the McCloud watershed)
- ♦ Shasta Valley Resource Conservation District
- ♦ Mt. Shasta Area Audubon
- ♦ Mt. Shasta Trail Association
- ♦ Siskiyou Land Trust
- ♦ Sierra Club, Mother Lode Chapter, Shasta Group
- ♦ Mt. Shasta Bioregional Ecology Center
- ♦ \*SA = Statutory Authority







# IRWMP Next Steps

- ◆ Interview on 6/9/09 went well
- ◆ Wait for approval (2-3 months)
- ◆ If approved and State budget works out then 30 million will be available for planning grants early next year



